

AMENDMENT TO THE CLAIMS

Please amend the claims to read as follows:

Claims 1-24 (Canceled).

Claim 25. (currently amended) A method of dehydrogenation of cyclic or acyclic carbonyl compounds to the corresponding α,β -unsaturated carbonyl compounds comprising contacting using a catalytically active composition comprising an active component of the formula $Pd_aBi_cY_d$

wherein $Y = Au$ or Rh ,

and wherein the indices a , c and d indicate the mass ratios of the respective elements and $0.1 \leq a \leq 3$, $0.1 \leq c \leq 3$ and $0 \leq d \leq 1$,

on silicon carbide or steatite as carrier

~~according to claim 19 on a carrier for the dehydrogenation of~~ with cyclic or acyclic carbonyl compounds to produce the corresponding α,β -unsaturated carbonyl compounds.

Claim 26. (previously presented) The method according to claim 25 wherein the cyclic or acyclic carbonyl compound is selected from the group consisting of cyclopentanone, butanone, butyraldehyde, cyclohexanone and isovaleraldehyde.

Claim 27. (currently amended) A method of dehydrogenation of cyclic or acyclic carbonyl compounds to the corresponding α,β -unsaturated carbonyl compounds comprising contacting using a catalytically active composition comprising an active component of the formula $Pd_aRh_bBi_c$

wherein the indices a, b, c indicate the mass ratios of the respective elements and $0.1 \leq a \leq 3$, $0 \leq b \leq 3$ and $0.1 \leq c \leq 3$,

on silicon carbide or steatite as carrier

~~according to claim 20 on a carrier for the dehydrogenation of~~ with cyclic or acyclic carbonyl compounds to produce the corresponding α,β -unsaturated carbonyl compounds.

Claim 28. (previously presented) The method according to claim 27, wherein the cyclic or acyclic carbonyl compound is selected from the group consisting of cyclopentanone, butanone, butyraldehyde, cyclohexanone and isovaleraldehyde.

Claim 29. (currently amended) A method of dehydrogenation of cyclic or acyclic carbonyl compounds to the corresponding α,β -unsaturated carbonyl compounds comprising contacting using a catalytically active composition comprising an active component of the formula Pd_aBi_c ,

wherein a and c indicate the mass ratios of the respective elements and $0.1 \leq a \leq 3$ and $0.1 \leq c \leq 3$,

on silicon carbide or steatite as carrier

~~according to claim 21 on a carrier for the dehydrogenation of~~ with cyclic or acyclic carbonyl compounds to produce the corresponding α,β -unsaturated carbonyl compounds.

Claim 30. (previously presented) The method according to claim 29, wherein the cyclic or acyclic carbonyl compounds are selected from the group consisting of cyclopentanone, butanone, butyraldehyde, cyclohexanone and isovaleraldehyde.

Claim 31. (currently amended) A method of dehydrogenation of cyclic or acyclic carbonyl compounds to the corresponding α,β -unsaturated carbonyl compounds comprising contacting using a catalytically active composition comprising an active component of the formula $\text{Pd}_a\text{Rh}_b\text{Bi}_c\text{Z}_e$

wherein $\text{Z} = \text{Ag}$ or Pt ,

and wherein the indices a, b, c and e indicate the mass ratios of the respective elements and $0.1 \leq a \leq 3$, $0 \leq b \leq 3$, $0.1 \leq c \leq 3$ and $0 \leq e \leq 1$,

on silicon carbide or steatite as carrier

~~according to claim 22 on a carrier for the dehydrogenation of~~ with cyclic or acyclic carbonyl compounds to produce the corresponding α,β -unsaturated carbonyl compounds.

Claim 32. (previously presented) The method according to claim 31, wherein the cyclic or acyclic carbonyl compounds are selected from the group consisting of cyclopentanone, butanone, butyraldehyde, cyclohexanone and isovaleraldehyde.

Claim 33. (currently amended) A method of dehydrogenation of cyclic or acyclic carbonyl compounds to the corresponding α,β -unsaturated carbonyl compounds comprising contacting using a catalytically active composition comprising an active component of the formula $\text{Pd}_a\text{Bi}_c\text{Co}_e$

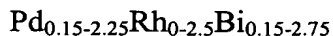
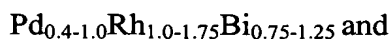
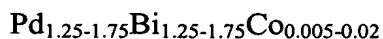
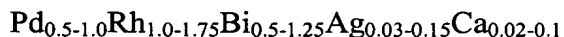
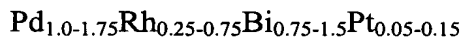
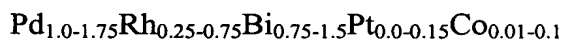
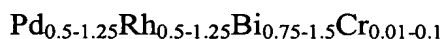
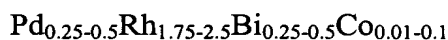
wherein the indices a, c and e indicate the mass ratios of the respective elements and $0.1 \leq a \leq 3$, $0.1 \leq c \leq 3$ and $0 \leq e \leq 1$,

on silicon carbide or steatite as carrier

~~according to claim 23 on a carrier for the dehydrogenation of~~ with cyclic or acyclic carbonyl compounds to produce the corresponding α,β -unsaturated carbonyl compounds.

Claim 34. (previously presented) The method according to claim 33, wherein the cyclic or acyclic carbonyl compounds are selected from the group consisting of cyclopentanone, butanone, butyraldehyde, cyclohexanone and isovaleraldehyde.

Claim 35. (previously presented) A method of dehydrogenation of cyclic or acyclic carbonyl compounds to the corresponding α,β -unsaturated carbonyl compounds comprising contacting using a catalytically active composition comprising an active component having a formula selected from the group consisting of:



~~according to claim 24~~ on a carrier for the ~~dehydrogenation of~~ with cyclic or acyclic carbonyl compounds to produce the corresponding α,β -unsaturated carbonyl compounds.

Claim 36. (previously presented) The use according to claim 35, wherein the cyclic or acyclic carbonyl compounds are selected from the group consisting of cyclopentanone, butanone, butyraldehyde, cyclohexanone and isovaleraldehyde.